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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/660,490	09/12/2003	Noriko Tomita	OHG 135	6341

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EXAMINER

LUU, CHUONG A

ART UNIT PAPER NUMBER

2818

DATE MAILED: 12/02/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/660,490

Applicant(s)

TOMITA ET AL.

Examiner

Chuong A. Luu

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 03 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 12 September 2005.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-12 and 19-25 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-12 and 19-25 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Response to Arguments

Applicant's arguments with respect to claims 1-12 and 19-25 have been considered but are moot in view of the new ground(s) of rejection.

PRIOR ART REJECTIONS

Statutory Basis

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

The Rejections

Claims 1-3, 6-9, 12 and 22-25 are rejected under 35 U.S.C. 102(b) as being anticipated by Minoru et al. (JP07-275813).

Minoru discloses a cleaning device with

(1) washing a semiconductor substrate so as to make the surface clean (see paragraphs [0007]-[0008]);

depositing a high molecular straight-chain organic compound, having a boiling point lower than the temperature of heat treatment of the wafer processing of the subsequent step, onto the clean surface of said semiconductor substrate during or after

washing of said semiconductor substrate (see paragraphs [0009]-[0013] and [0044]-[0047]);

(2); (8) wherein said high molecular straight-chain organic compound is selected from substances of lower boiling point than 500°C (see paragraphs [0044]-[0047]);

(3); (9); (25) wherein said high molecular straight-chain organic compound of a single type (see paragraphs [0044]-[0047]);

(6); (12) wherein, after deposition of said high molecular straight-chain organic compound onto the surface of the semiconductor substrate, said high molecular straight-chain organic compound further eliminated by the heat treatment temperature (see paragraphs [0044]-[0047]);

(7); (23) washing a semiconductor substrate (see paragraphs [0007]-[0008]);
depositing a high molecular straight-chain organic compound having a boiling point lower than the temperature of heat treatment of the wafer processing of the subsequent step onto the surface of said semiconductor substrate by spin coating which liquid containing the high molecular straight-chain organic compound and pure water discharged from a spray nozzle while rotating the semiconductor substrate during or after washing of the semiconductor substrate (see paragraphs [0009]-[0013] and [0043]-[0047]);

(22) comprising keeping the substrate in a clean room containing ambient organic compounds having a molecular weight lower than that of the high molecular straight-chain organic compound (see paragraphs [0009]-[0013] and [0044]-[0047]);

(24) wherein the straight-chain organic compound does not contain unsaturated bonds (see paragraphs [0009]-[0013] and [0044]-[0047]).

PRIOR ART REJECTIONS

Statutory Basis

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The Rejections

Claims 4-5 and 10-11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Minoru et al. (JP07-275813) in view of Shimizu et al. (U.S. 5,827,444).

Minoru discloses the claimed invention except for the high molecular straight-chain organic compound is cholesterol ($C_{27}H_{46}O$) and behenic acid ($C_{21}H_{43}COOH$). However, Shimizu discloses a magnetic fluid with (4); (5); (10); (11) wherein the high molecular straight-chain organic compound is cholesterol ($C_{27}H_{46}O$) and behenic acid ($C_{21}H_{43}COOH$) (see column 4, lines 1-4; column 2, lines 49-51). It would have been obvious to one having ordinary skill in the art at the time the invention was made to select the suitable materials to achieve its objective, since it has been held to be within the general skill of a worker in the art to select a known material on the basis of its

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suitability for the intended use as a matter of obvious design choice. In re Leshin, 125 USPQ 416.

Claims 19 and 21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Minoru et al. (JP07-275813) in view of Shinozaki (U.S. 6,432,481 B1).

Minoru teaches the above outlined features except for wherein the subsequent step includes one of thermal oxidation and reduced pressured CVD. However, Shinozaki discloses a recording material wherein heating causes surface tension inclination with **(19); (20)** wherein the subsequent step includes one of thermal oxidation and reduced pressured CVD (see column 23, lines 59-67 and column 24, lines 1-6). It would have been obvious to one having ordinary skill in the art at the time the invention was made to select the suitable materials to achieve its objective, since it has been held to be within the general skill of a worker in the art to select a known process on the basis of its suitability for the intended use as a matter of obvious design choice.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Chuong A. Luu whose telephone number is (571) 272-1902. The examiner can normally be reached on M-F (6:15-2:45).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David C. Nelms can be reached on (571) 272-1787. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

A handwritten signature in black ink, appearing to read 'Chuong Anh Luu', is positioned above the printed name.

Chuong Anh Luu
Patent Examiner
November 18, 2005